

In The Claims

1 1. (Original) A seed planting assembly comprising:
2 a laterally extending tool bar;
3 a planting unit including a planting unit frame supported by the tool bar,
4 wherein the planting unit frame carries:
5 i. a seed trench opening assembly operable to create a seed
6 trench;
7 ii. a seed delivery assembly delivering seeds into the seed
8 trench; and
9 iii. a seed trench closing assembly operable to close the seed
10 trench;
11 a mounting assembly including an upper and lower support beam
12 members pivotally linking the planting unit frame with the tool bar, wherein the
13 mounting assembly permits the planting unit to raise and lower with respect to
14 the tool bar;
15 a vertical positioner including a first linkage connected to the lower beam
16 member, and a second linkage connected to the first linkage at a positioner
17 joint and further in mechanical communication with the planting unit frame; and
18 a biasing member urging the second linkage towards the positioner joint.

1 2. (Original) The seed planting assembly as recited in claim 1,
2 wherein the second linkage is connected to the upper beam member at a
3 location between the planting unit frame and the positioner joint.

1 3. (Original) The seed planting assembly as recited in claim 1,
2 wherein the first and second linkages are pivotally connected to the mounting
3 assembly.

1 4. (Original) The seed planting assembly as recited in claim 1,
2 wherein the lower beam member defines a plurality of locations spaced along
3 the lower beam and configured to connect to the first linkage.

1 5. (Original) The seed planting assembly as recited in claim 1,
2 wherein the second linkage defines a slot operable to receive an actuating
3 lever.

1 6. (Original) The seed planting assembly as recited in claim 1,
2 wherein the first linkage further comprises a stop that engages the second
3 linkage when the planting unit is raised.

1 7. (Currently Amended) The seed planting assembly as recited in
2 claim 1, wherein the second linkage is connected to the upper beam member at
3 a second joint; and,

1 8. (Original) The seed planting unit as recited in claim 7, wherein the
2 biasing member is a spring.

1 9. (Original) The seed planting assembly as recited in claim 8,
2 wherein a first spring terminal end is connected to a rearward end of the second
3 linkage, and wherein a second spring terminal end is connected to the vertical
4 positioner at a location forward from the rearward end.

1 10. (Original) The seed planting assembly as recited in claim 9,
2 wherein the second spring terminal end is connected to a pin extending through
3 the second joint.

1 11. (Original) The seed planting assembly as recited in claim 10,
2 wherein an elongated groove extends through the second linkage at the second
3 joint.

1 12. (Original) The seed planting assembly as recited in claim 9,
2 wherein the first spring terminal end is connected to a flange extending
3 outwardly from the second linkage.

1 13. (Currently Amended) The seed planting assembly as recited in
2 claim 1, wherein ~~the a~~ spring member provides a force that resists the planting
3 unit from being raised relative to the tool bar.

1 14. (New) A seed planting assembly comprising:
2 a laterally extending tool bar;
3 a planting unit including a planting unit frame supported by the tool bar,
4 wherein the planting unit frame carries:
5 i. a seed trench opening assembly operable to create a seed
6 trench;
7 ii. a seed delivery assembly delivering seeds into the seed
8 trench; and
9 iii. a seed trench closing assembly operable to close the seed
10 trench;
11 a mounting assembly including an upper and lower support beam
12 members pivotally linking the planting unit frame with the tool bar, wherein the

13 mounting assembly permits the planting unit to raise and lower with respect to
14 the tool bar;
15 a vertical positioner including a first linkage connected to the lower beam
16 member, and a second linkage connected to the first linkage at a positioner
17 joint and further in mechanical communication with the planting unit frame; and
18 a biasing member urging the second linkage towards the positioner joint;
19 wherein the lower beam member defines a plurality of locations spaced
20 along the lower beam and configured to connect to the first linkage.

1 15. (New) The seed planting assembly as recited in claim 14, wherein
2 the second linkage defines a slot operable to receive an actuating lever.

1 16. (New) The seed planting assembly as recited in claim 14, wherein
2 the first linkage further comprises a stop that engages the second linkage when
3 the planting unit is raised.

1 17. (New) A seed planting assembly comprising:
2 a laterally extending tool bar;
3 a planting unit including a planting unit frame supported by the tool bar,
4 wherein the planting unit frame carries:
5 i. a seed trench opening assembly operable to create a seed
6 trench;
7 ii. a seed delivery assembly delivering seeds into the seed
8 trench; and
9 iii. a seed trench closing assembly operable to close the seed
10 trench;
11 a mounting assembly including an upper and lower support beam
12 members pivotally linking the planting unit frame with the tool bar, wherein the
13 mounting assembly permits the planting unit to raise and lower with respect to
14 the tool bar;

15 a vertical positioner including a first linkage connected to the lower beam
16 member, and a second linkage connected to the first linkage at a positioner
17 joint and further in mechanical communication with the planting unit frame; and
18 a biasing member urging the second linkage towards the positioner joint;
19 wherein the second linkage is connected to the upper beam member at a
20 second joint;
21 wherein the biasing member is a spring; wherein a first spring terminal end is
22 connected to a rearward end of the second linkage, and wherein a second
23 spring terminal end is connected to the vertical positioner at a location forward
24 from the rearward end; wherein the second spring terminal end is connected to
25 a pin extending through the second joint; wherein an elongated groove extends
26 through the second linkage at the second joint.

1 18. (New) The seed planting assembly as recited in claim 17, wherein
2 the first spring terminal end is connected to a flange extending outwardly from
3 the second linkage.